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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,172	08/28/2003	Peter Simonson	D4669-US	5964
42716	7590	02/10/2006	EXAMINER	
MAINE & ASMUS P. O. BOX 3445 NASHUA, NH 03061			PATEL, FAHD	
			ART UNIT	PAPER NUMBER
			2194	

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/650,172	Applicant(s) SIMONSON ET AL.	
	Examiner Fahd Patel	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/15/03, 3/3/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-28, drawn to a device driver and associated API, classified in class 719, subclass 321.
 - II. Claims 29-41, drawn to implementation of a software component upon a physical device, classified in class 718, subclass 100.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case invention I relates to a device driver and API that reside on a system that interfaces with a physical device. Alternatively, invention II relates to software components that are downloaded onto a physical device and the management therein.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Andrew Cernota on 2/3/2006 a provisional election was made without traverse to prosecute the invention of group I, claim 1-28.

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Affirmation of this election must be made by applicant in replying to this Office action.

Claims 29-41 are withdrawn from further consideration by the examiner, 37

CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1, 3, 5, 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

7. As per claim 1, line 4, the phrase "said at least one device object", lacks antecedent basis.

8. As per claim 1, line 11, the word "through" in the context of the claim language is unclear. The claim describes a system where the adaptation layer connects directly to the physical device, and it is presumed that the software component is at a higher level of abstraction than the adaptation layer. Therefore, it is unclear how anything can pass through the software component interface to the physical device

9. As per claim 3, line 2, the phrase "said software-based frameworks for distributed computing," lacks antecedent basis.

10. As per claim 5, line 4, the last character should be a period and not a semi colon.

11. As per claim 7, line 1, the term “an adaptation layer interface”, has already been defined in claim 1. This should read, “said adaptation layer interface.”

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-28 rejected under 35 U.S.C. 102(b) as being anticipated by Keller et al. (U.S Patent 5,752,032), hereafter Keller.

14. As per claim 1, Keller teaches

at least one physical device (30, Fig. 4);

an adaptation layer, comprising an adaptation layer interface and said at least one device object, said device object comprising at least one capability object and one physical device interface object; said physical device interface object corresponding to and controlling electrical interfaces to said physical device (74, 76, 78, 80, 82, 84, 86, Fig. 2);

at least one software component interface communicating with said adaptation layer interface (64, 66, 68, 70-72, Fig. 2);

at least one software component, coupled to said software component interface (54, Fig. 2); and

wherein said adaptation layer controls said physical device through said software component interface (col. 9, lines 19-23).

15. As per claim 2, Keller teaches that said physical device is at least one physical device chosen from the group of physical devices consisting of programmable devices, general purpose processors, specialized circuits, and field programmable gate arrays (col. 6, lines 48-63).

16. As per claim 3, Keller teaches that said at least one software component interface is common to said software-based frameworks for distributed computing (col. 9, lines 1-13).

17. As per claim 4, Keller teaches that said at least one software component interface comprises at least six service interfaces (col. 11, table 2, lines 60-64).

18. As per claim 5, Keller teaches that said at least one software component interface comprises:

a communication service interface; and

a control service interface (col. 11, table 2, lines 60-67; col. 12, table 3).

19. As per claim 6, Keller teaches
a deployment service interface',
a communication service interface;
a communication connection service interface',
an engineering service interface;
a control service interface; and
a component behavior control interface (col. 11, table 2, lines 60-67; col. 12,
table 3).

20. As per claim 7, Keller teaches said adaptation interface providing a single point
of interface between said adaption layer and said at least one software component
interface (50, Fig. 2)

21. As per claim 8, Keller teaches that said at least one physical device is interfaced
to a general-purpose processor (fig. 1).

22. As per claim 9, Keller teaches a processor core deployed on at least one said
physical device (col. 6, lines 13-23).

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23. As per claim 10, Keller teaches that said physical device interface object controls said physical device independently from a functionality performed by said physical device (col. 30, lines 34-45).

24. As per claim 11, Keller teaches that said capability object controls a functionality performed by said physical device independently from said physical device (col. 9, lines 19-23).

25. As per claim 12, Keller teaches that said physical device is replaceable (col. 6, lines 48-65).

26. As per claim 13, Keller teaches that said physical device interface object is replaceable (col. 9, lines 19-26; col. 22, lines 11-24).

27. As per claim 14, Keller teaches that said capability object is replaceable (col. 9, lines 19-26).

28. As per claim 15, Keller teaches that said capability object provides activities for compliance with a software network, said activities comprising:

deployment;

control;

behavior control;

establishment of connections for communications;
communication and data transfer; and
data sampling and output (col. 9, lines 41-64).

29. As per claim 16, Keller teaches that said capability object comprises
at least one base instance object
at least one communications object, having a communication instance object;
and
at least one engineering object, having an engineering instance object (col. 9,
lines 35-64).

30. As per claim 17, Keller teaches that said base instance object, said
communication instance object, and said engineering instance object are replaceable
(col. 9, lines 19-23).

31. As per claim 18, it is rejected for the same reasons as claim 16 above.

32. As per claim 19, it is rejected for the same reasons as claim 2 above.

33. As per claim 20, Keller teaches that said base instance is configured to provide
deployment, control, and behavior control activities (col. 9, lines 35-41).

34. As per claim 21, Keller teaches that said communications object is configured to provide establishment of connections for communications and communication and transfer of data activities (74', Fig. 4).

35. As per claim 22, Keller teaches that said engineering object is configured to sample data at a test point and transfer to an application for display and analysis (col. 17, lines 61-67; col. 18, table XI).

36. As per claim 23, Keller teaches that said communication object comprises a communication instance object, said communication instance object is configured to provide deployment, control, and behavior control activities (col. 17, lines 61-67; col. 18, table XI).

37. As per claim 24, Keller teaches that said engineering object comprises an engineering instance object, said engineering instance object is configured to provide deployment, control, and behavior control activities (col. 17, lines 61-67; col. 18, table XI).

38. As per claim 25, Keller teaches a communications instance object, a engineering instance object; said communication instance object, said engineering instance object, and said base instance object each being independently replaceable (col. 9, lines 15-23).

39. As per claim 26, it is rejected for the same reasons as claims 1, 13, 14 above.

40. As per claim 27, it is rejected for the same reasons as claim 2 above.

41. As per claim 28, the examiner invokes OFFICIAL NOTICE that a plurality of software components may be deployed on each said processor. It is elementary that in a multi-processor system, components are executed in a distributed fashion.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Renda (U.S Patent 5,991,836).
- Parry (U.S Patent 6,845, 508 B2).
- Yang et al., Developing integrated Web and database applications using JAVA applets and JDBC drivers, Technical Symposium on Computer Science Education Pages: 302 - 306 Year of Publication: 1998.
- Bruce, et al., Re-useable hardware/software co-verification of IP blocks., ASIC/SOC Conference, 2001. Proceedings. 14th Annual IEEE International On, page(s): 413 – 417.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fahd Patel whose telephone number is (571) 272-1044. The examiner can normally be reached on 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thompson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FHP


WEI ZHEN
SUPERVISORY PATENT EXAMINER